962-N1-270 **Barry Cherkas*** (barry.cherkas@hunter.cuny.edu), Department of Mathematics & Statistics, 695 Park Avenue, New York, NY 10021. *Visualization in Precalculus with Mathematica.*

The purpose of this presentation is twofold: (1) to demonstrate a newly-programmed, add-on Precalculus package in Mathematica designed to enhance plots of singular functions so that they appear as they typically do in precalculus and calculus textbooks, and (2) to describe two cases where technology, by taking the drudgery out of unwieldy equation solving, enables students to delve more deeply into important, visually-based precalculus concepts that are otherwise excluded from precalculus-level coursework. In particular: (1) we show that every cubic has a point of symmetry and demonstrate how to find it; (2) we demonstrate how to find all turning points for polynomials of any degree, using only precalculus concepts, and (3) in the case of the general cubic, we obtain a complete classification of the number of turning points based on a discriminant-like term. (Received September 06, 2000)